◈ Installation manual for CE machine

Index

1. Check machine installation condition and balance

(1) Installation condition

1) Temperature : ① Runtime 0℃ ~ 40℃ (32°F~104°F)

② Stop -25℃ ~ 55℃ (-13°F~131°F)

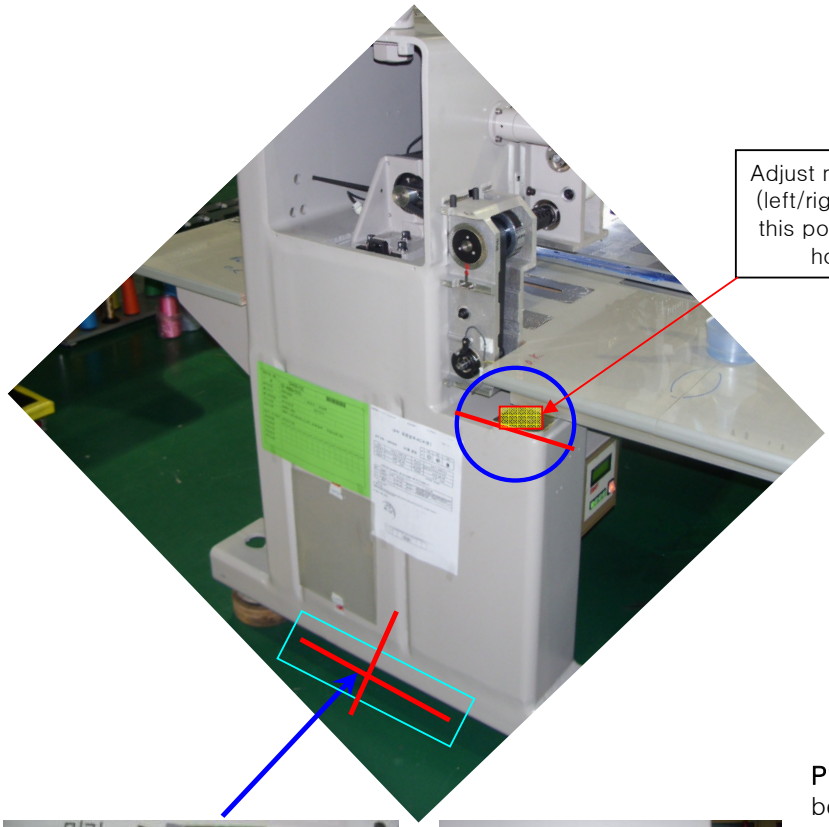
2) Humidity : 45 ~ 85 % (Relative Humidity)

3) Earth (Ground) : The earth(ground) must contact to land.

Caution) Electrical short is very dangerous, so make and check the ground cable touch to land
Ground should be third class (less 100Ω)

4) The floor should endure the weight of machine and it should be flat.

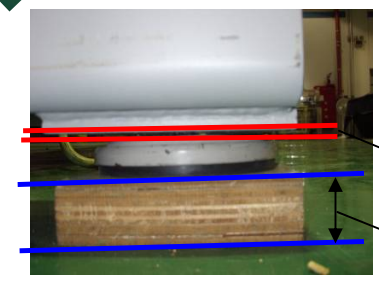
(2) Check Balance



Adjust machine balance (left/right, front/rear) in this point. - Use water hose or level

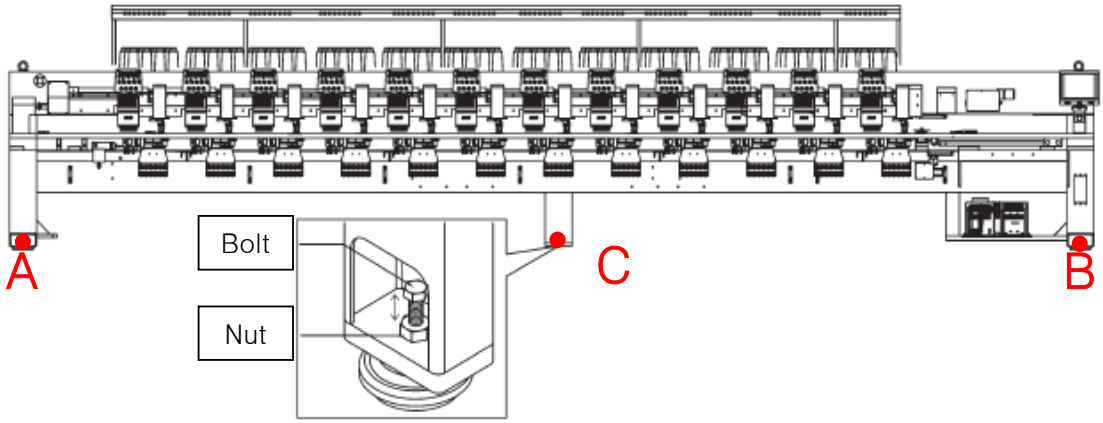
Beam side

While leveling work, the bolt receive heavy weight so it's better to use some tools which can lift the machine.

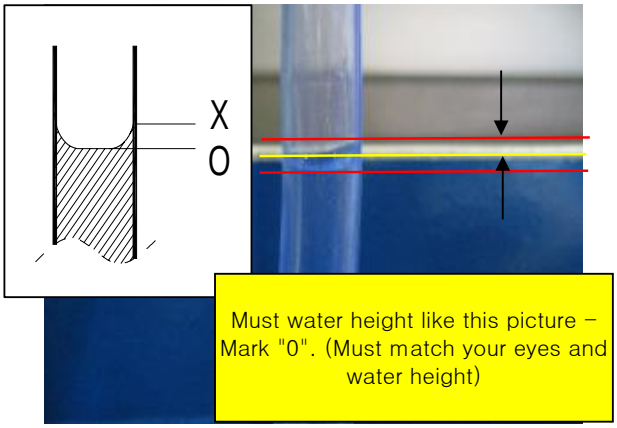


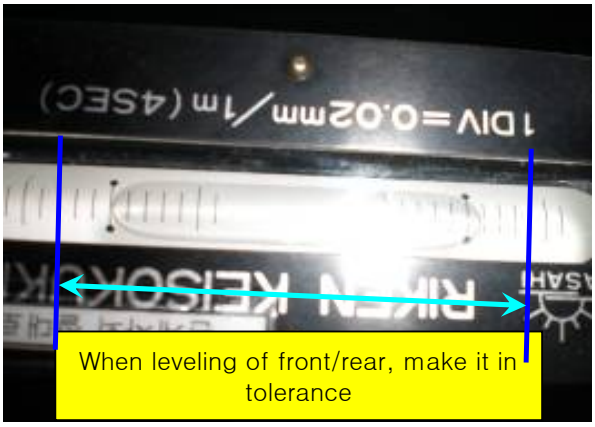
P1 – If it is not able to adjust balance because of floor is to low, add wooden block

P2 – Fix the bolt after making level base and machine bottom 1mm



※ When you set leveling of machine, first make standard in A side and then match the water height in B side. (Should match with beam body standard plate.) If the water height is different from A and B, should adjust the bolt and make them match.
If the water height is lower than Beam body standard plate, make standard to B side.
After that, adjust height of C. (Should check distance of Arm upper surface and Bed upper surface)





◈ How to set middle supporter
1. In case of Mix type
   ▶ Middle part Head direction (Ex, 15 head machine, open needle plate of #7 & #8)
   Open needle plate and insert low dead point Jig and set middle supporter. (main angle 201°)
2. In case of ONIY type
   ▶ Set position cam by 1 level on the OP.
   Insert 2mm guage between middle needle plate and hook needle.
   (Ref. Chenille needlebar setting manual)

2. Attache spool stand and check exterior.

(1) How to attach spool stand

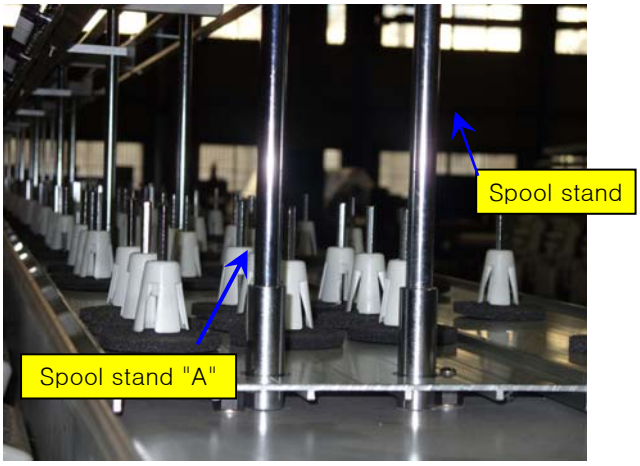
1) Put on spool stand A and spool stand to stand stud bolt.

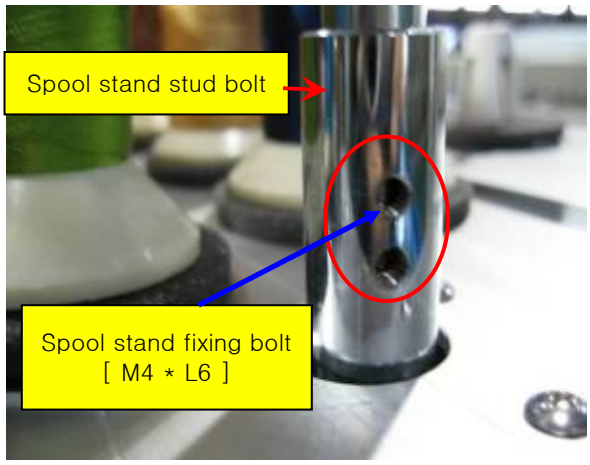
2) Put on thread angle and thread angle D and fix them by bolt.

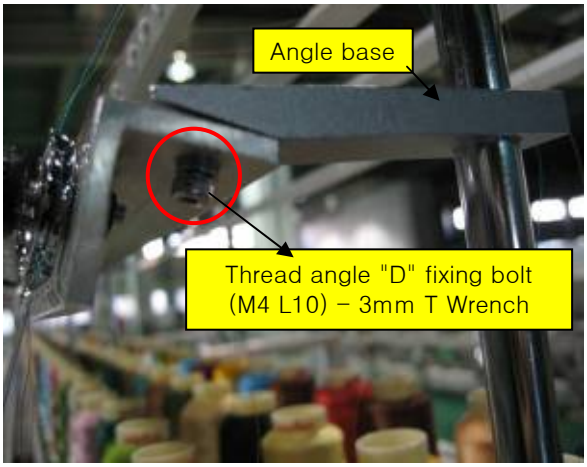
3) Fix spool stand fixing bolts and angle fixing bolts.

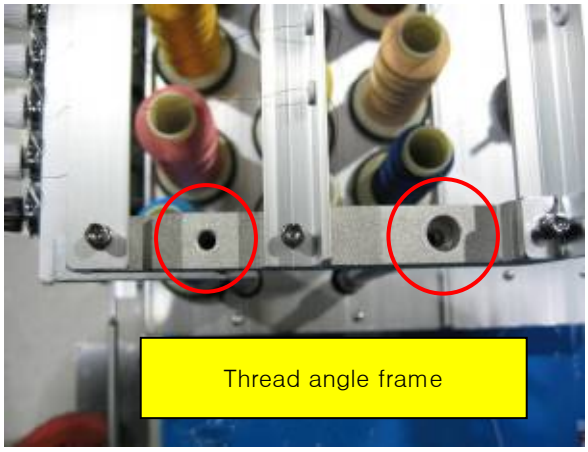
4) Check all bolts fixing.

※ If you don't fix the bolts, the spool stand will shake more so you could feel the machine vibration is very much.









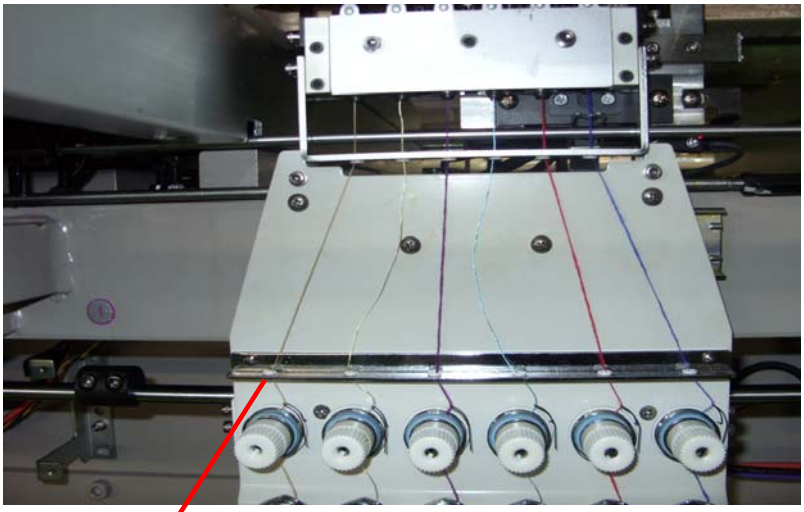
(2) How to attach Spool stand for Chenille

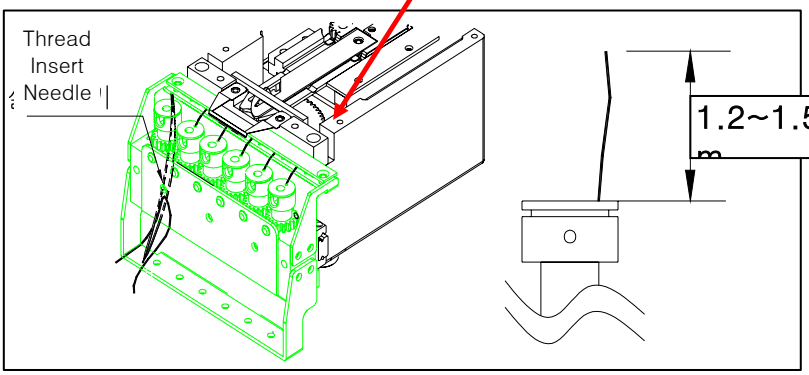
1) Put on the Spool plate under the table.

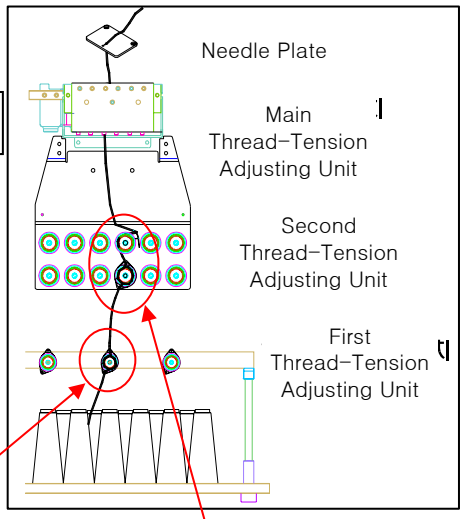
2) Put in the spools into spool post and insert to tension adjusting set.

3) When insert chenille thread in the tension adjusting set, insert the thread to rotary tension take spring and then connect to thread guide hole and tension plate connecting bracket.

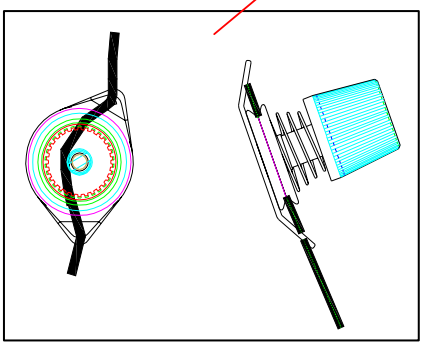
4) After connecting chenille thread and insert looper sleeve.

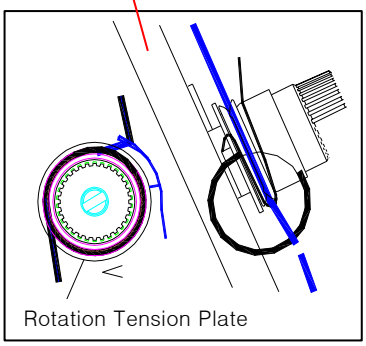






* Should be the 0.2mm gap
in left and right side of tention unit





3. Check electric condition

(1) Electric condition

Must check the rated electric power spec before install and run the machine.

Check below information of machine.

1) Input voltage and machine voltage : 1 phase / 3 phase

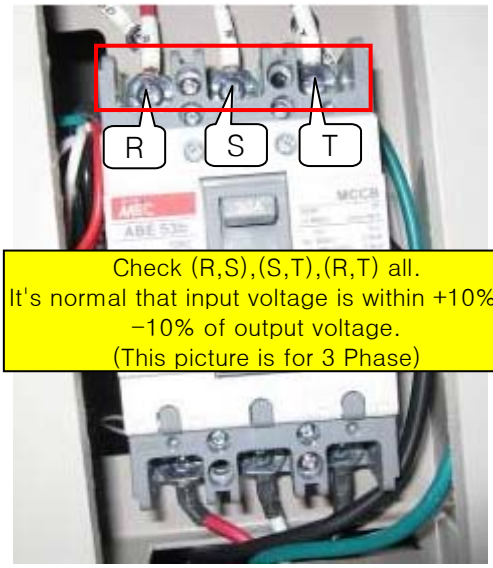
2) Allowable voltage : Whthin ±10% of rated voltage

3) Power capacity and : 3KVA 1.4 ~ 1.6KW

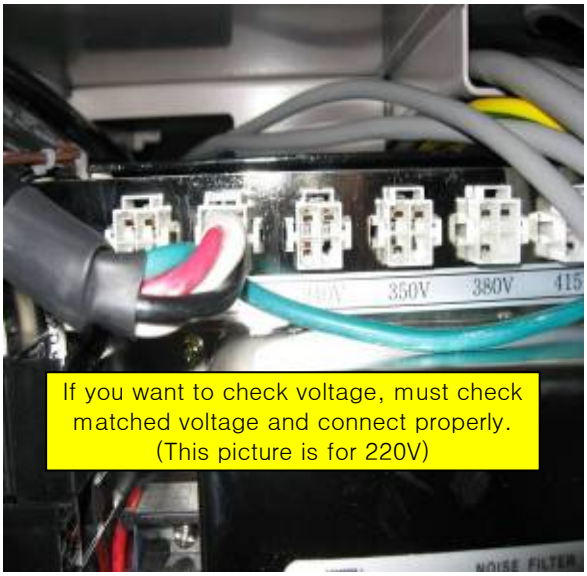
4) Insulation Resistance :10 MΩ above (using a 500V insulation tester)

① Must check Factory supply voltage.
② Be careful with cables way, somebody could hang the power cable.

(2) Chack Voltage



Check (R,S),(S,T),(R,T) all.
It's normal that input voltage is within +10% ~ -10% of output voltage.
(This picture is for 3 Phase)



If you want to check voltage, must check matched voltage and connect properly.
(This picture is for 220V)

▶ Check (R,S),(S,T),(R,T) all if it's for 3 phase.

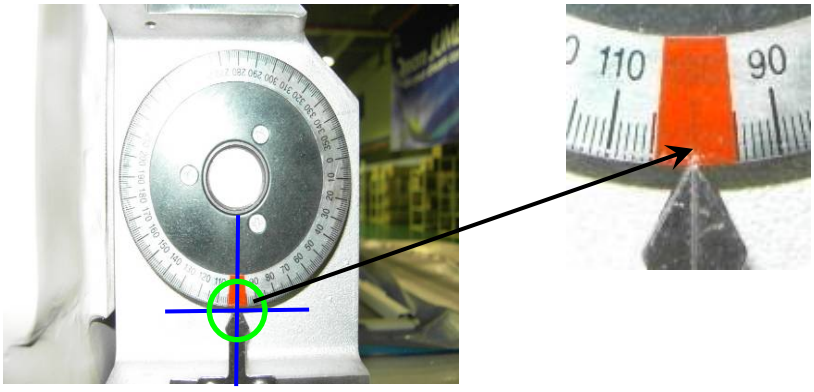
※ It's normal that input voltage is within +10% ~ -10% of output voltage. If it is out of this range must fix it.
◈ Usually we use protection equipment.
AVR (Autometic Volteage Regulator)
UPS (Uninterruptible Power Supply)

1) It's better to use **3KW AVR**.

2) If many machines connect one AVR, should check the capacity of AVR and add AVR properly.

4. Normal motion test

(1) CE machine motion test



[Pic. 4]

※ Machine check

Home position – 100° [Pic. 4]

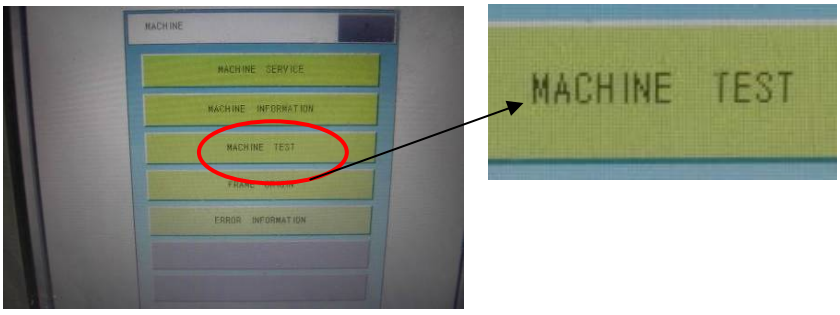
◈ When turn on the machine it will make a position at 100° automatically. [Pic. 4]

After that, below check point.

[Pic. 5]

▶ Turn on the machine, select MACHINE
[Pic. 5]

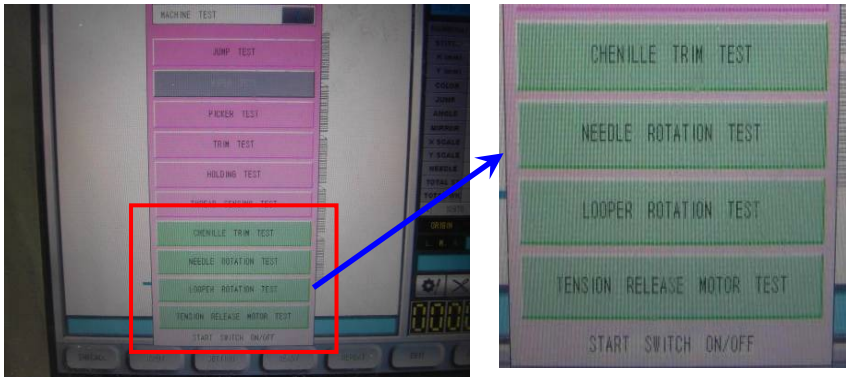
* You will move to [Pic. 6]



[Pic. 6]

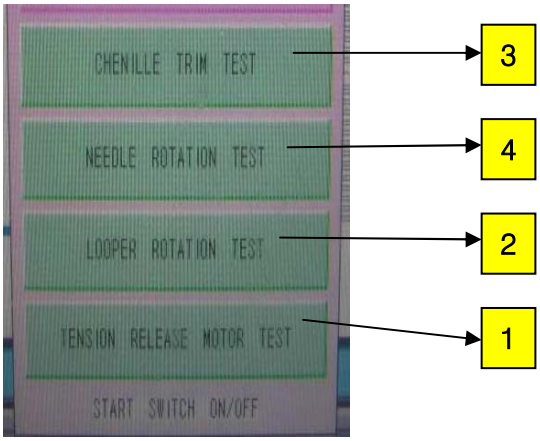
▶ Select MACHINE TEST [Pic. 6]

* You will move to [Pic. 7]



▶ [Pic. 7] is normal motion test screen

[Pic. 7]



[Pic. 8]

※ Motion test order

1. TENSION RELEASE MOTOR TEST

2. LOOPER ROTATION TEST

3. CHENILL TRIM TEST

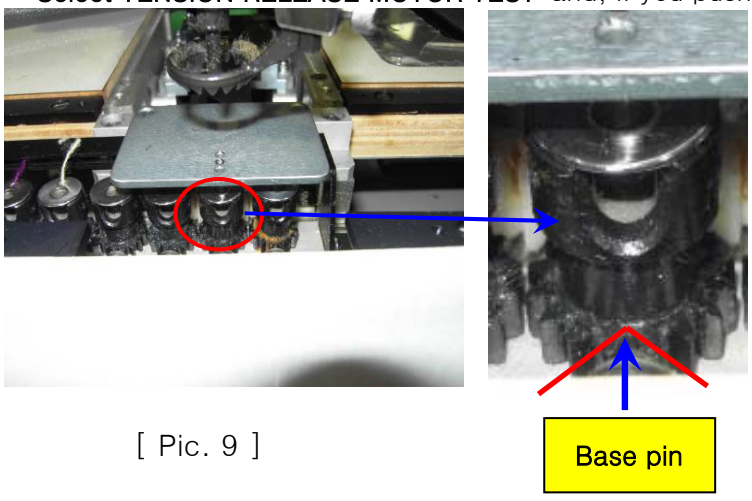
4. NEEDLE ROTATION TEST

※ Explanation of CE Motion test

1. TENSION RELEASE MOTOR TEST

▶ MACHINE → MACHINE TEST → [Pic. 8]

Select TENSION RELEASE MOTOR TEST and, if you push START key, looper will move up and down. – 상하로
At this time, check if looper gear and base pin are on center or not.



[Pic. 9]

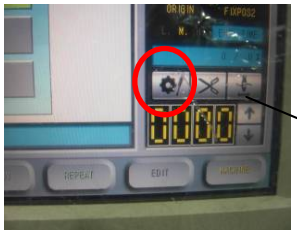
Caution
If the looper gear and base pin are not on center, looper will jam and make problem.

2. LOOPER ROTATION TEST

Push LOOPER ROTATION TEST and, while pushing START Key, Looper will spin right side, and while keep pus
STOP Key, Looper will spin left side.

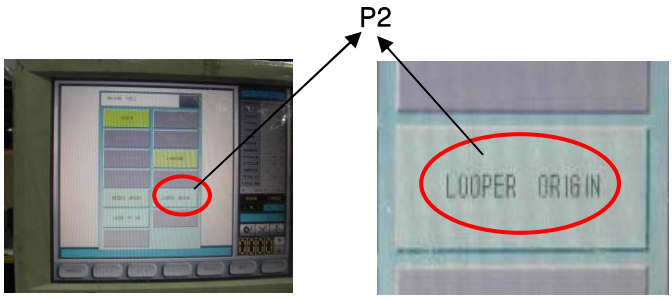
After that do LOOPER ORIGIN.

[How to LOOPER ORIGIN]

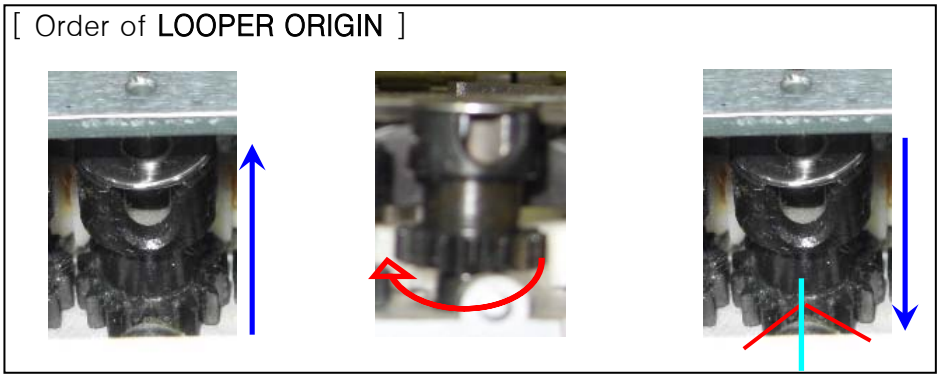


1. Select Tool. (P1)

2. Select LOOPER ORIGIN like P2.



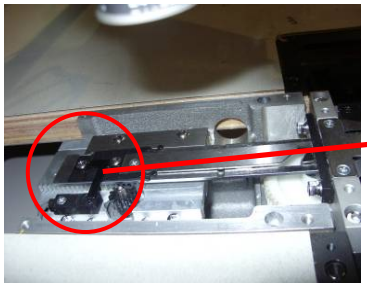
[Order of **LOOPER ORIGIN**]



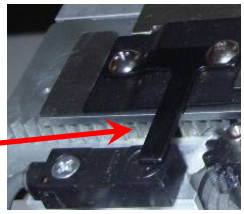
Looper Up ▶ Looper spin – Origin ▶ Looper Down

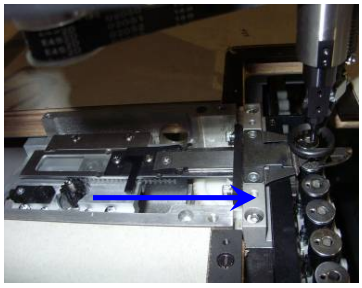
3. CHENILL TRIM TEST

Select **CHENILL TRIM TEST**, when push **START Key**, miving mes will work and return to origin.
Check jamming of moving mes in both end side, through color change of Chenille.

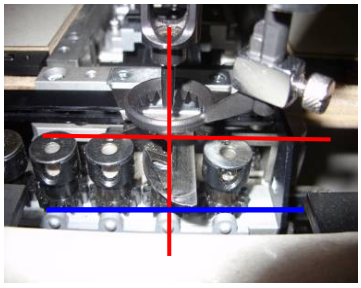


Moving mes origin position





Moving mes maximum position



Moving mes maximum back position

4. NEEDLE ROTATION TEST

Select **NEEDLE ROTATION TEST**, when push **START Key,** Needlebar will spin right side, when puch **STOP Key** it will spin left side.
Checking jamming when needlebar spins.

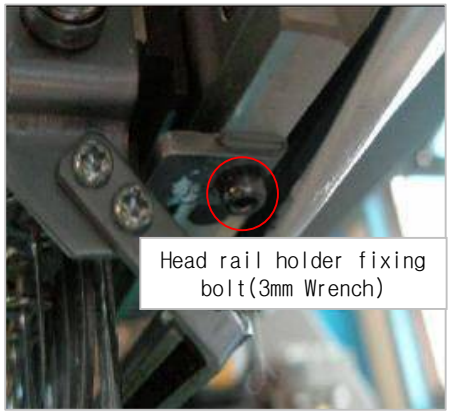
5. Machine setting

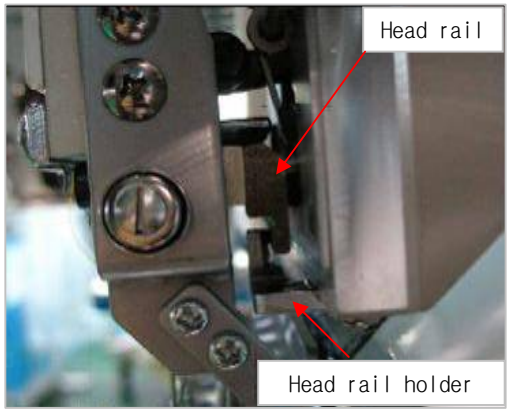
※ Do setting according to below order.

Setting order

(1) Check Head gap and needle drop point

1) Check Head gap





① Check head gap (front/rear) in middle needlebar.

② Check gap in #1 needlebar.

③ When finding gap of head front/rear, adjust head rail holder fixing bolt by 3m wrench, and make it 0.1mm. (Ref. above pictures)

※ If head gap is big, thread brackage and damaging needlebar could happen. If head gap is too small, there occurs load when color change.

2) Checking needle drop point.

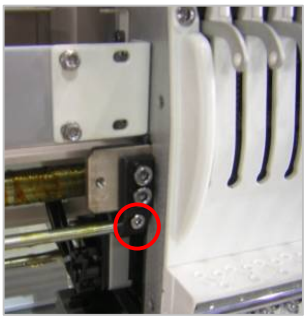
① Check needlebar in 130~140° when it is middle needlebar.

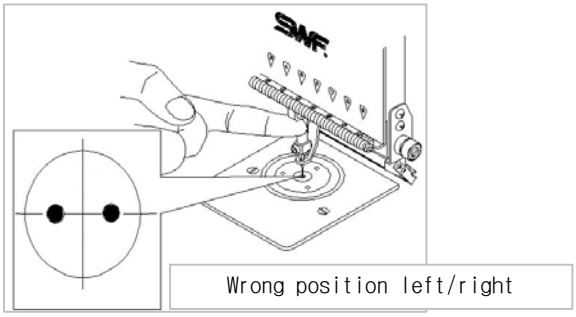
--> Check the needle is DBK5#11.

② If neddle drop point is wrong, re-set middle needle drop point and the frist and end needle drop p

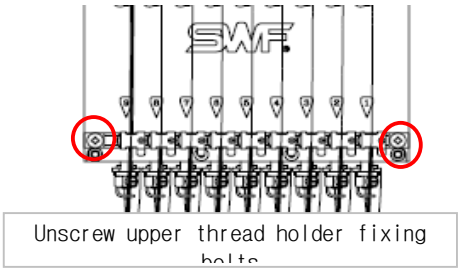
- Needle drop point is wrong to left/right direction,

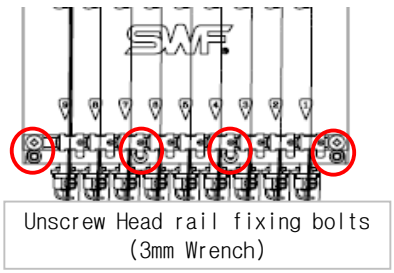
: Unscrew the head moving shaft bracket fixing bolt, and adjust left/right drop point. (4mm Wrer

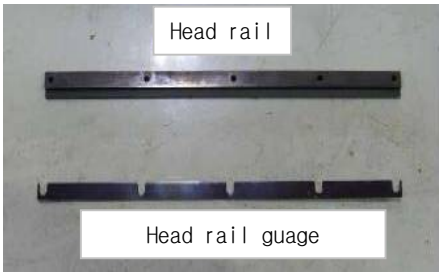


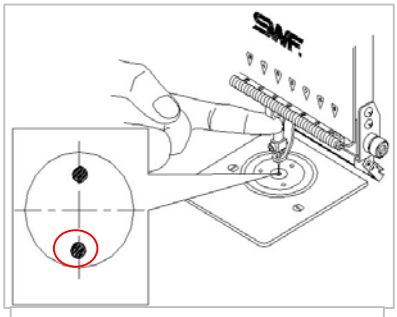


- When setting front/rear needle drop point, unscrew upper thread holder base bolts(1pcs) and disassemble hea

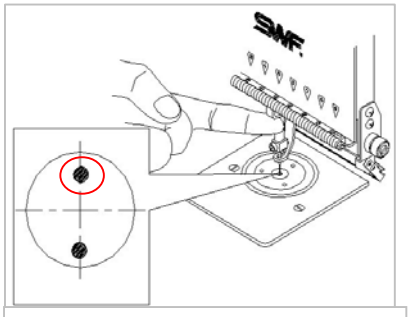








needle drop position leans



needle drop position leans rear

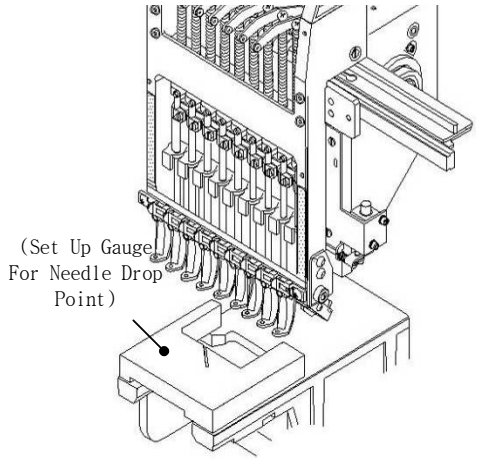
- Needle drop point leans to front side
  : Check head rail guage, if there is it remove the guage
  If needle drop point is still front side, replace head rail.
  ※ E Flat Head rail standard specification -> 4.4 T

- Needle drop point leans to rear side
  : Insert Head rail guage between Head and Head rail.
  ※ Kind of head rail guage → 0.1T, 0.2T, 0.3T

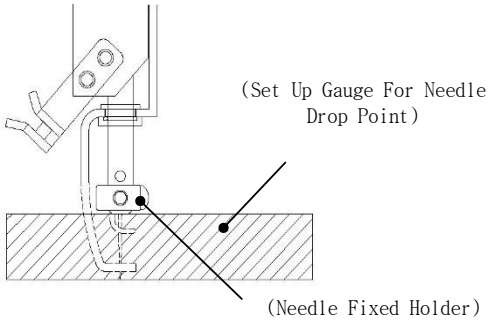
(2) Needlebar upper/low dead point

※ Usually it is not essential check point, but if you think there is a problem, check all heads

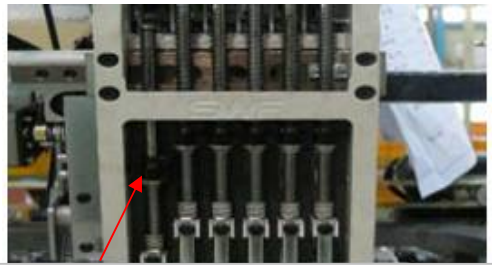
1) Put out needle plate and set main angle 201.
2) Insert low dead point jig between bed and needlebar, and then check gap of them. If there is some g
   setting upper/lower dead point.



Lower dead point Jig(17.7m)



① Lower dead point setting
: Main angle 201, place the Jig on Bed after that unscrew needlebar fixing bolt. Push the needleba
downward and fix needlebar holder bolt after lifting up needlebar holder.
Check gap of Jig again.



fix needlebar holder bolt after lifting up needlebar

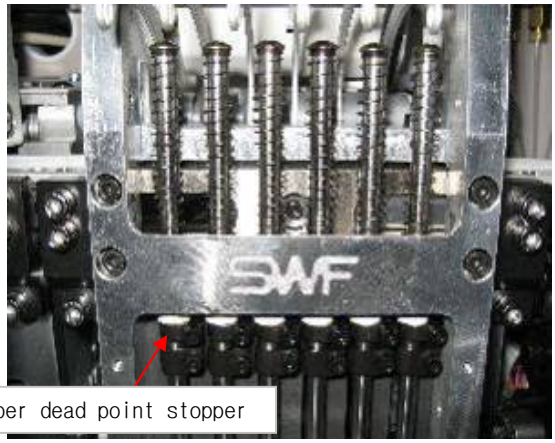
② Upper dead point setting

: ᛁChenille Arm(Presserfoot height)

check gap of upper dead point stopper shaking.

When the gap it there, needlebar could not work properly.

It could make noise also.



upper dead point stopper

(3) Hook timing check

Before hook setting, do set needlebar properly (right direction).

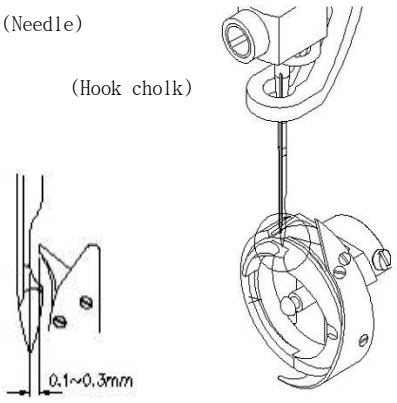
1) Check Hook timing and gap (shaking)

① Put out needle plate, set main angle 201. After that check Hook timing and gap.

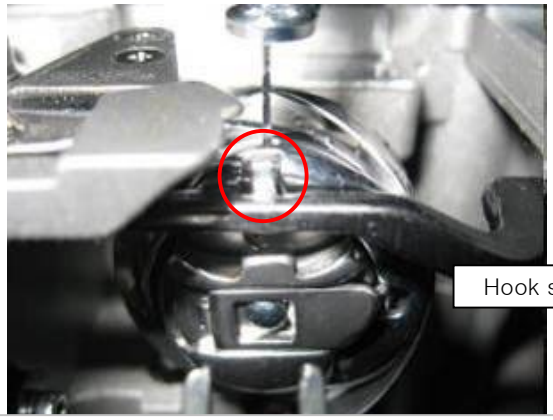
- Must re-set when Hook cholk position is wrong an big or no gap between Hook and needle.
- Gap between Hook and needle : 0.1~0.3mm

② Hook timing setting

- unscrew 2 bolts of hook fixing bolts (middle needlebar)
- Main angle 201, check the gap of Hook cholk and needle.
- After finishing hook setting, check the first and end needlebar. And then fix all hook fixing bolts.



Gap between Hook and needle : 0.1~0.3mm



Adjust position of Hood support ; the marked part should be center of needle.
- Gap of Hook : 0.5~0.7mm

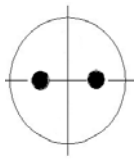
(4) Needle drop point check

1) Insert looper lever into the Plate For Looper Position.

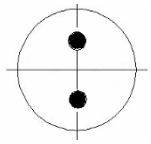
2) Main angle 110, spin nipple rotation gear and set hook needle place at center of needle plate.

3) After setting position of Needle at 5@ hole of looper lever, set position of needle at the center. After the bolt.

4) Fix looper lever base bolt after set needle straight with 1.5@.

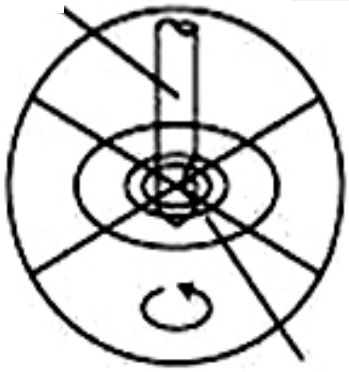


Needle drop position leans left/right

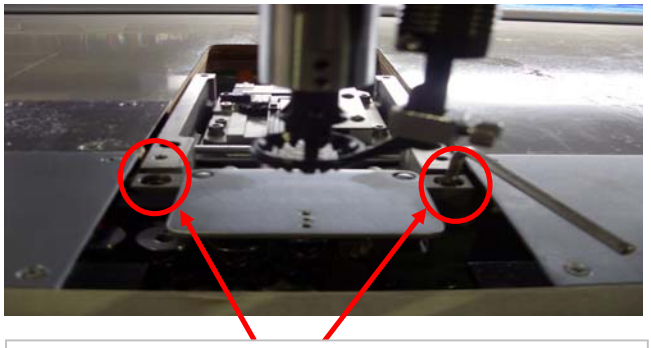


Needle drop position leans front/rear

바늘



Needleplate hole



Adjust needle drop point with fixed mes base fixing

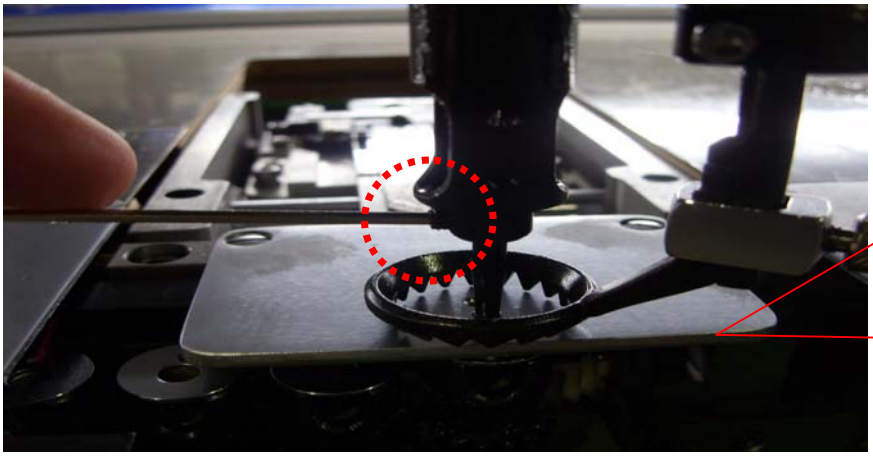
(5) Nipple height set after matching nipple and needle plate with working condition.

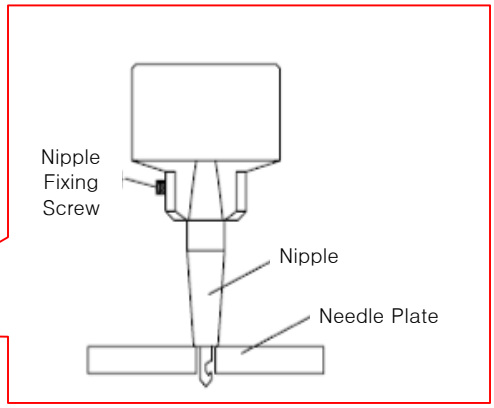
※ Usually it is not essential check point, but if you think there is a problem, check all heads.

1) Nipple height setting

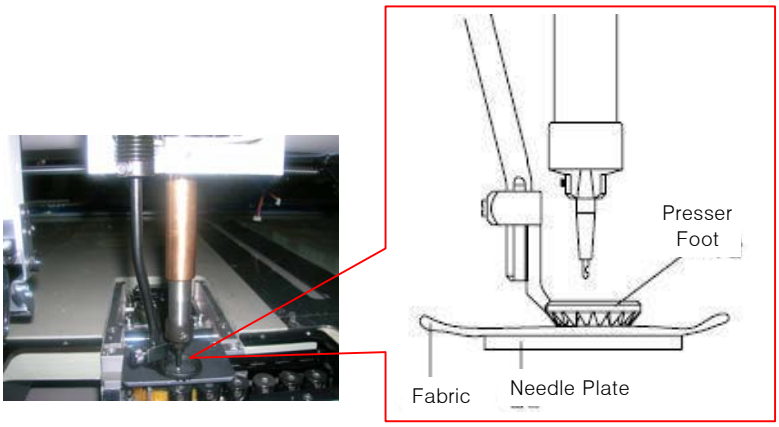
① Machine -> Machine Service -> Nipple set, START, after that fix the nipple pressing with needle pl

Check nipple holder inserts into the nipple rotary shaft.

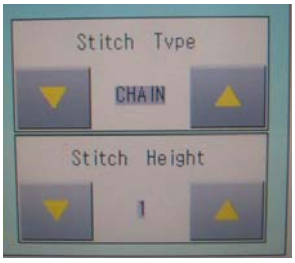


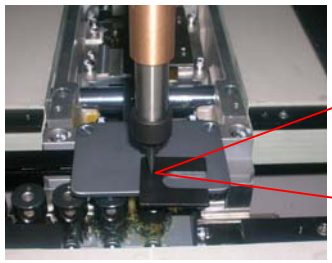


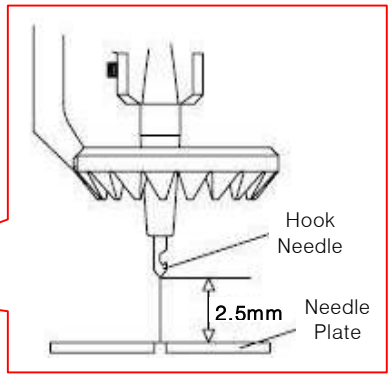
(6) Chenille needle height setting(**2.5T from needle plate**) and Presserfoot setting(0.5T from needle plate)



1) Set position cam 1 level in the OP operation.
2) Insert hook needle to needlebar.
3) Insert into needle sleeve and put 2mm guage between needle plate and hook needle.
4) When the hook of hook needle it front direction, attach needlebar clamp.
5) Assemble needlebar like screen.







6. Lubrication and running test (Loop/Chain)

(1) Running Test

1) Set lubrication systme manually, lubricate 10times (24CC each) to ARM,BED,Chenille and check lubricating.
2) Run the machine in each needlebar with DADAMI design. (600RPM)
3) Check breakaway of low shaft bearing bushing, heating of driving shafts, noise in frame anc
4) Check vibration of machine.
5) After Running Test, check machine condition.

(2) Embroidery work Test

1) Normal work

※ Check machine condition after test with customer's fabric, thread, and test design.
Condition of DADAMI embroidery, cutting thread, and thread breakage

※ Test customer's design also.

※ When testing, teach how to operate and manage the machine to customer.

2) Chenille work

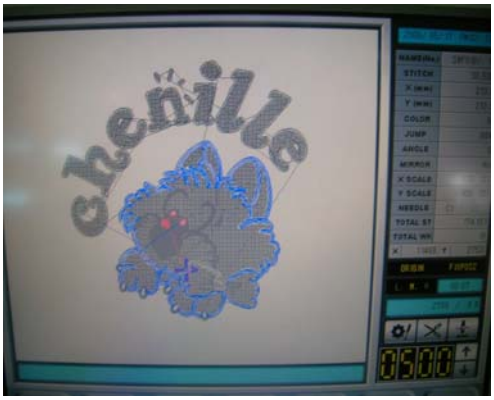
① Test with customer's dedign as the final test
(Check cutting thread, thread breakage.)

※ When testing, teach how to operate and manage the machine to customer.

② If don't have customer's design, test with below factory test design.
- Design for chain stitch test (Below working condition is standard of SWF factory)

- Design for loop and chain stitch test (Below working condition is standard of SWF factory)

☞ working condition
1. Design :
2. Running RPM : 600rpm
3. Test number of times
: 1 time
4. Fabric :



CE INSTALLATIOM REPORT

Nation		Model	
Agent		Serial No.	
Customer		Version Date	
Ins. Date		Technician	

NO	Check List
1	Check installation condition before installation
	The situation when arriving at the factory ☐ Wood box Opened ☐ Moving the machine to factory ☐ Installing the machine ☐ While assembling (Work order:) ☐ Finish installation ☐ Etc. ( ) (1) Temperature, moisture, environment of surroundings ☐ Good ☐ Bad (2) Floor : (3) Ground condition/quality of material : (4) Leveling of ground ☐ Good ☐ Bad (5) Machine setting Voltage : (6) Input Voltage : 1P (V) 3P (R↔S : V) (R↔T : V) (S↔T : V)
2	Check exterior of the machine
	(1) Machine landing - Check machine balance at the first ☐ Good ☐ Bad - Check again after adjusting leveling (In case of Bad ar the first) ☐ Good ☐ Bad (2) Check condition of Frame and interference (foreign subtance) - Check the Frame condition at the first ☐ Good ☐ Bad - Check interference(foreign subtance) of Frame ☐ Good ☐ Bad

3 Motion TEST / Running TEST

Test after machine landing

(1) CONTROL UPDATE result	☐ Good	☐ Bad
(2) TENSION RELEASE MOTOR TEST	☐ Good	☐ Bad
(3) LOOPER ROTATION TEST	☐ Good	☐ Bad
(4) CHENILL TRIM TEST	☐ Good	☐ Bad
(5) NEEDLE ROTATION TEST	☐ Good	☐ Bad
(6) JUMP TEST	☐ Good	☐ Bad
(7) WIPER TEST	☐ Good	☐ Bad
(8) PICKER TEST	☐ Good	☐ Bad
(9) TRIM TEST	☐ Good	☐ Bad
(10) THREAD SENSING TEST	☐ Good	☐ Bad

4 Check needle drop point and setting

Normal heads

① At the First

Head / Needle	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
#1	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Middle	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
End	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕

② After setting

Head / Needle	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
#1	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
Middle	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕
End	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕

※ Should record if you use guage.

Chenille - Check needle drop point

① At the First

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Drop point	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕

② After setting

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Drop point	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕

5 Check Hook timing and setting

Hook timing 201°, re-setting in case there is no gap or it's over 3mm.

① At the First

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Gap															

② After setting

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Gap															

6 Check Presserfoot height and setting

Normal head - All needle No. 1.2mm from bed upper side(surface)

① At the First ☐ Good ☐ Bad

② After setting ☐ Good ☐ Bad

※ According to working material, able to adjust (standard : 1.2mm, Thin:under 0.7mm, Thick:upper 1.2m

Chenille Arm(Needlebar height)

- When needle plate upper surface↔Hook needle 1level gap is not 2.0mm, reset.

① At the First ☐ Good ☐ Bad

② After setting ☐ Good ☐ Bad

Chenille Arm(Presserfoot height)

- When presserfoot height is not 0.5mm from needle plate upper surface, reset.

① At the First ☐ Good ☐ Bad

② After setting ☐ Good ☐ Bad

7 Check needlebar upper/lower dead point and setting

Normal head all needles, when upper dead point is not 201 °, lower dead point is not 0°, reset

① At the First

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
upper D.P															
lower D.P															

② After setting

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
upper D.P															
lower D.P															

7	Check needlebar upper/lower dead point and setting

Chenille Arm(Nipple height) - In case rong nipple height(not 185°) or replacing nipple, reset.

① At the First

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Height															

② After setting

Needle no.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Height															

8	Running TEST.

※ Check the machine condition after test with customer's fabric, thread and Test design.
DADAMI working condition, cutting thread, thread breakage.
(If don't have customer's design, should use test design in SWF factory)

※ Should check thread breakage, missing first stitch, working time and make a report.

Attache original design and EMB sample in the report.

※ When testing, teach how to operate and manage the machine to customer.